

LISTING OF CLAIMS:

1. (Previously presented) A semiconductor dynamic quantity sensor comprising:

a support substrate having an opening portion open on a surface thereof;

first and second movable electrode supporting portions fixed to the support substrate;

a movable electrode supported by the first and second movable electrode supporting portions to be displaced in accordance with a dynamic quantity applied thereto;

first and second fixed electrode supporting portions fixed to the support substrate; and

a fixed electrode supported by the first fixed electrode supporting portion at a first end of the fixed electrode and the second fixed electrode supporting portion at a second end of the fixed electrode and facing the movable electrode with a detection interval defined therebetween, the detection interval being changed to detect the dynamic quantity when the movable electrode is displaced, wherein

the first and second movable electrode supporting portions are provided on opposed sides of the opening portion; and

the first and second fixed electrode supporting portions are provided on the opposed sides of the opening portion.
2. (Original) The semiconductor dynamic quantity sensor according to claim 1, wherein an axis connecting the first and second movable electrode supporting portions is approximately parallel to an axis connecting the first and second fixed electrode supporting portions.

3. (Original) The semiconductor dynamic quantity sensor according to claim 1, wherein the opening portion is generally rectangular.

4. (Previously presented) The semiconductor dynamic quantity sensor according to claim 1, wherein:

the movable electrode has a weight portion that is connected to the first and second movable electrode supporting portions at both ends thereof, and has a pole portion protruding from the weight portion;

the fixed electrode has a connecting portion that is connected to the first and second fixed electrode supporting portions at both ends thereof, and has a pole portion protruding from the connecting portion and having a side face facing a side face of the pole portion of the movable electrode.

5. (Canceled)

6. (Canceled)

7. (Previously presented) A semiconductor dynamic quantity sensor comprising:

a support substrate having an opening portion open on a surface thereof;

first and second movable electrode supporting portions fixed to the support substrate;

a movable electrode supported by the first and second movable electrode supporting portions to be displaced in a displacement direction in accordance with a dynamic quantity applied thereto;

first and second fixed electrode supporting portions fixed to the support substrate; and

a fixed electrode supported by the first fixed electrode supporting portion at a first end of the fixed electrode and the second fixed electrode supporting portion at a second end of the fixed electrode and facing the movable electrode with a detection interval defined therebetween, the detection interval being changed to detect the dynamic quantity when the movable electrode is displaced, wherein the first and second movable electrode supporting portions are arranged in a direction approximately parallel to a direction in which the first and second fixed electrode supporting portions are arranged.

8. (Original) The semiconductor dynamic quantity sensor according to claim 7, wherein the direction in which the first and second movable electrode supporting portions and the first and second fixed electrode supporting portions are respectively arranged is approximately parallel to the displacement direction of the movable electrode.

9. (Original) The semiconductor dynamic quantity sensor according to claim 7, wherein:
one of the first and second movable electrode supporting portions and one of the first and second fixed electrode supporting portions are provided on a first side of the opening portion;
and

another one of the first and second movable electrode supporting portions and another one of the first and second fixed electrode supporting portions are provided on a second side of the opening portion opposed to the first side.

10. (Original) The semiconductor dynamic quantity sensor according to claim 9, wherein the movable electrode and the fixed electrode respectively have pole portions facing each other with the detection interval defined therebetween, the pole portions extending approximately in parallel with the first side and the second side of the opening portion.

11-18 (Canceled)

19. (Currently amended) A semiconductor dynamic quantity sensor comprising:

a frame member ~~comprising a first frame and a second frame~~ including a first frame part, an opposing second frame part, and an opening defined by, and located between, the first frame part and the second frame part;

a movable electrode having a detection surface and being supported above the opening in a displacement direction by an anchor portion that is anchored to at least one of the first frame part and the second frame part, ~~and being sandwiched between the first frame and the second frame, which oppose one another in a displacement direction of the movable electrode, the movable electrode being supported by the first frame and the second frame through a beam portion that is~~ the movable electrode being displaceable in the displacement direction by in response to a dynamic quantity applied thereto; and

a fixed electrode supported by the frame member and having a detection surface facing the detection surface of the movable electrode while defining a detection interval that is changed to detect the dynamic quantity when the movable electrode is displaced by the dynamic quantity,

wherein

a difference between a width of the first frame part and a width of the second frame part is 15% or less of the smaller of the width of the first frame part and the width of the second frame part.

20. (Previously presented) A semiconductor dynamic quantity sensor according to claim 19, wherein a difference between the width of the first frame part and the width of the second frame part is 10% or less of the smaller of the width of the first frame part and the width of the second frame part.

21. (Previously presented) A semiconductor dynamic quantity sensor comprising:

a support substrate having an opening portion open on a surface thereof;

first and second movable electrode supporting portions fixed to the support substrate;

a movable electrode supported by the first and second movable electrode supporting portions to be displaced in accordance with a dynamic quantity applied thereto;

first and second fixed electrode supporting portions fixed to the support substrate; and

a fixed electrode supported by the first and second fixed electrode supporting portions and facing the movable electrode with a detection interval defined therebetween, the detection

interval being changed to detect the dynamic quantity when the movable electrode is displaced, wherein:

the first and second movable electrode supporting portions are provided on opposed sides of the opening portion;

the movable electrode has a weight portion that is connected to the first and second movable electrode supporting portions at both ends thereof, and has a pole portion protruding from the weight portion;

the fixed electrode has a connecting portion that is connected to the first and second fixed electrode supporting portions at both ends thereof, and has a pole portion protruding from the connecting portion and having a side face facing a side face of the pole portion of the movable electrode; and

the connecting portion of the fixed electrode has a bent portion that is bent to extend toward one of the first and second movable electrode supporting portions.

22. (Previously presented) A semiconductor dynamic quantity sensor comprising:

a support substrate having an opening portion open on a surface thereof;

first and second movable electrode supporting portions fixed to the support substrate;

a movable electrode supported by the first and second movable electrode supporting portions to be displaced in accordance with a dynamic quantity applied thereto;

first and second fixed electrode supporting portions fixed to the support substrate; and

a fixed electrode supported by the first and second fixed electrode supporting portions and facing the movable electrode with a detection interval defined therebetween, the detection

interval being changed to detect the dynamic quantity when the movable electrode is displaced, wherein:

the first and second movable electrode supporting portions are provided on opposed sides of the opening portion;

the movable electrode has a weight portion that is connected to the first and second movable electrode supporting portions at both ends thereof, and has a pole portion protruding from the weight portion;

the fixed electrode has a connecting portion that is connected to the first and second fixed electrode supporting portions at both ends thereof, and has a pole portion protruding from the connecting portion and having a side face facing a side face of the pole portion of the movable electrode;

the fixed electrode has two pole portions respectively protruding from the connecting portion; and

the connecting portion is widened at a portion connecting the two pole portions.

23. (New) A semiconductor dynamic quantity sensor according to claim 19, wherein the first frame part and the second frame part are formed from a first semiconductor layer, and the opening comprises a through hole that is formed in, and therefore penetrates, the first semiconductor layer.

24. (New) A semiconductor dynamic quantity sensor according to claim 23, wherein the movable and fixed electrodes are formed from a second semiconductor layer located above the first semiconductor layer, the second semiconductor layer being separated from the first semiconductor layer by an oxide film embedded therebetween and including a through hole corresponding generally to the through hole formed in the first semiconductor layer.